Facility and Process Review Training Workshop

Office of Food Protection and Consumer Health Services

Division of Food Control

Authority

- Health-General Article, §21-321, Annotated Code of Maryland
  - Applicable to Food and Drink Processing and Transportation under COMAR 10.15.04
  - Applicable to Food Service Facilities under COMAR 10.15.03
- http://www.dsd.state.md.us/comar/

Facility and Process Review

- FAPR of Food Processing Plants performed by DFC

- FAPR of retail Food Service Facilities performed by local jurisdictions
  - Except prototype FSF's

Facility and Process Review

- Prototypes: Two or more food service facilities to be built from a uniform set of plans
  - Menu
  - Equipment
  - Finishes
  - Layout: design is not required to be exact

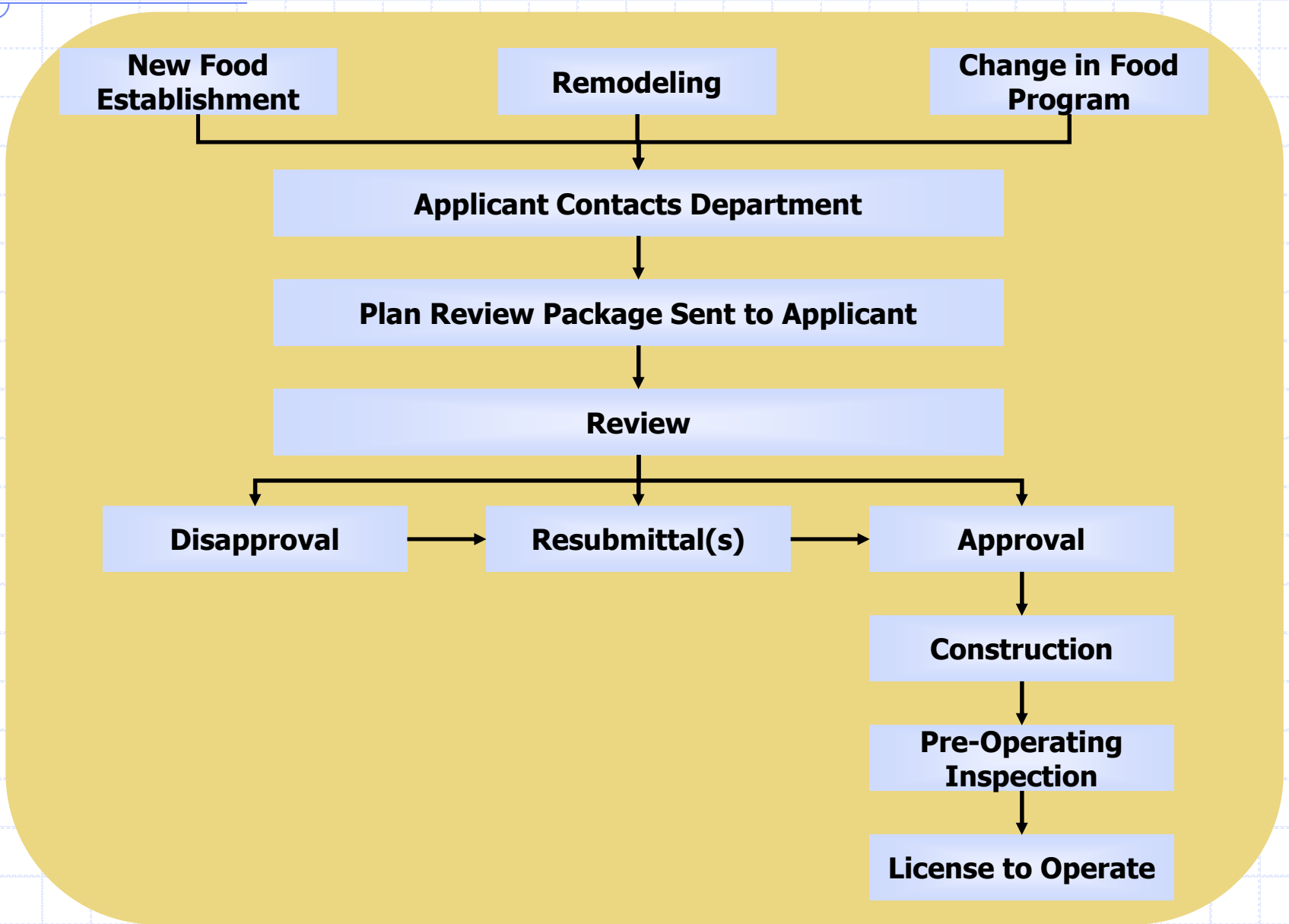
FAPR

- FAPR is an integrated review of:
  - Food processes and procedures
  - Plans for the facility's physical structure and environment
  - Non-food operating procedures
  - Personnel training and management, e.g. thermometer calibration, dish washing, and hand washing

Reasons for Review

- New food establishment
  - Extended closure and change of ownership
- Remodel of existing facility
- Addition of new equipment
- Substantial menu change

FAPR Step-by-Step

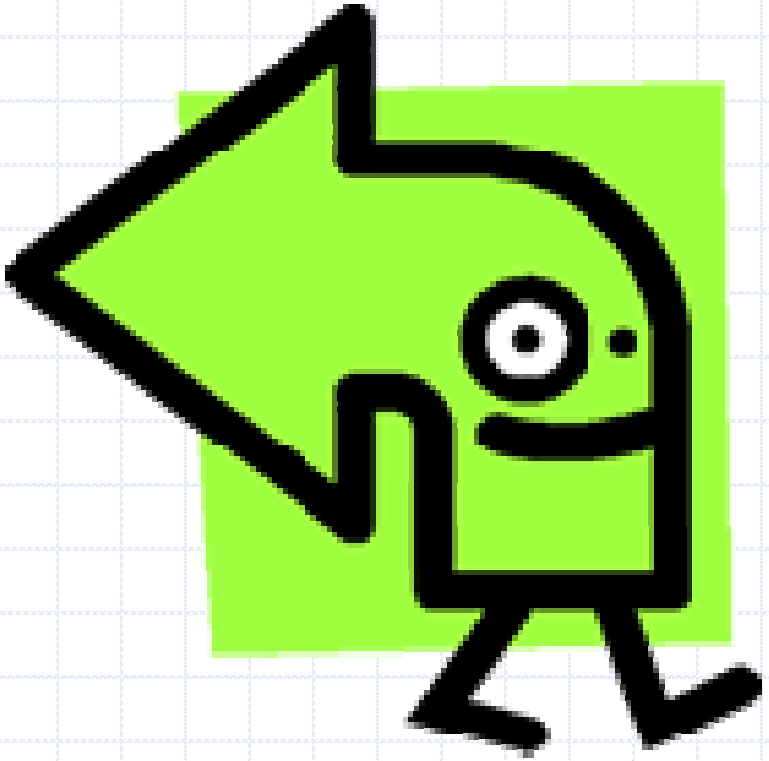


Benefits of FAPR

- Insures compliance
- Helps in preventing food borne illness
- Helps prevent misunderstandings between customers
- Helps prevent food process/construction errors

FAPR: Food Processing Plants

- Building or remodeling plans for food processing plants are submitted to State DFC
  - If plans are submitted to LH, redirect to DFC



FAPR: Chain & Franchise

- Prototype plans to be repeated one or more times in the State are submitted to DFC
  - If plans are submitted to LH, redirect to DFC
- LH with legal authority to review plans for retail prototype plans
  - LH should inform submitter of dual review
  - DFC can not impose local requirements on these duplicative reviews

FAPR Protocol

- Prototypical plan review of retail FSF by DFC will include:
  - Priority assessment
  - HACCP plan review
  - Physical facility plan review

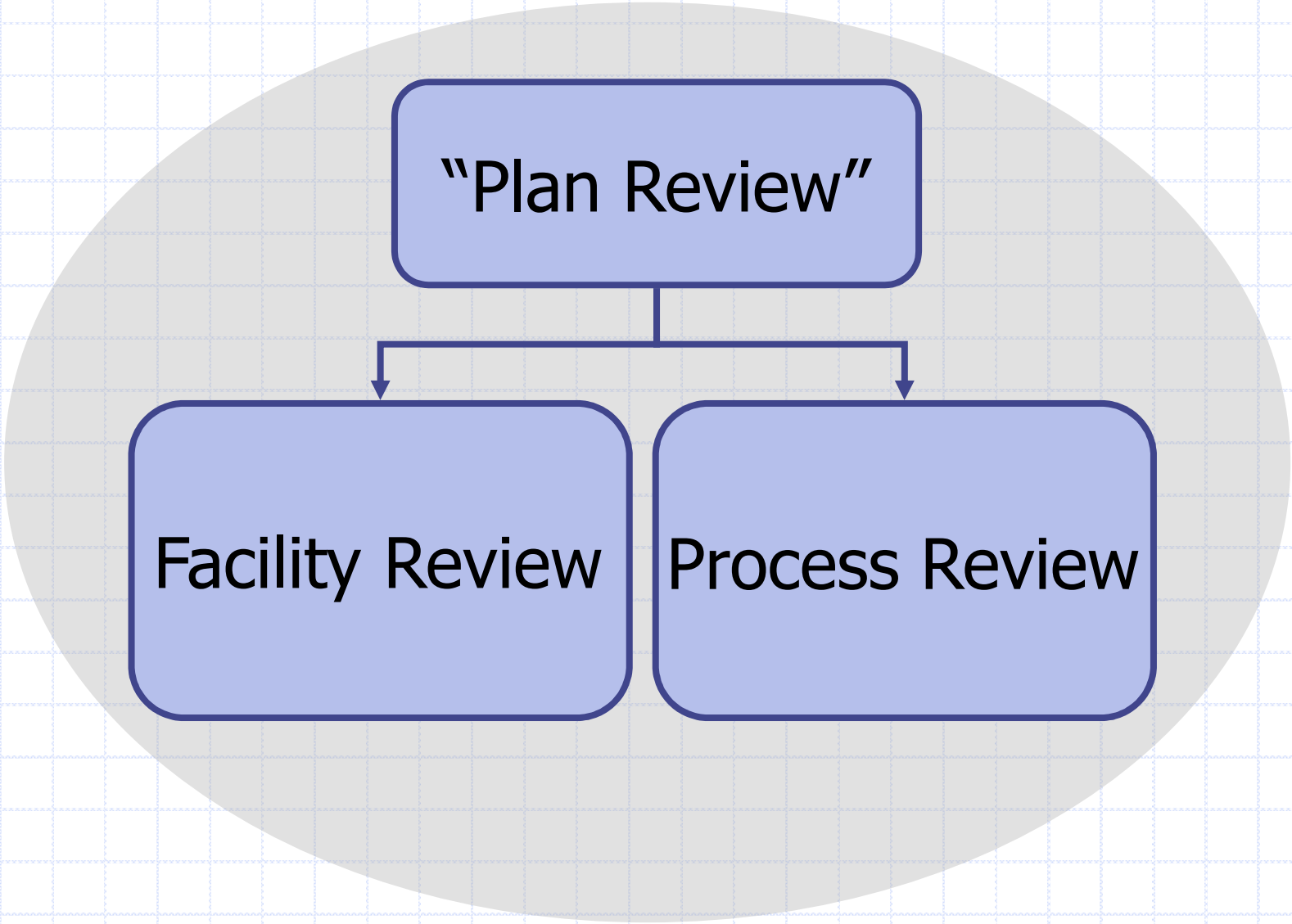
FAPR Protocol

- DFC will notify LH when food processing or prototypical plans are reviewed
  - Plan review comment letter
  - Plan approval/disapproval
  - HACCP plan approval and Priority assessment
- DFC will inform applicants of duplicative review requirement where applicable
  - E.g. Harford Co. plumbing review, Aberdeen, Rockville, Hagerstown, PG Co.

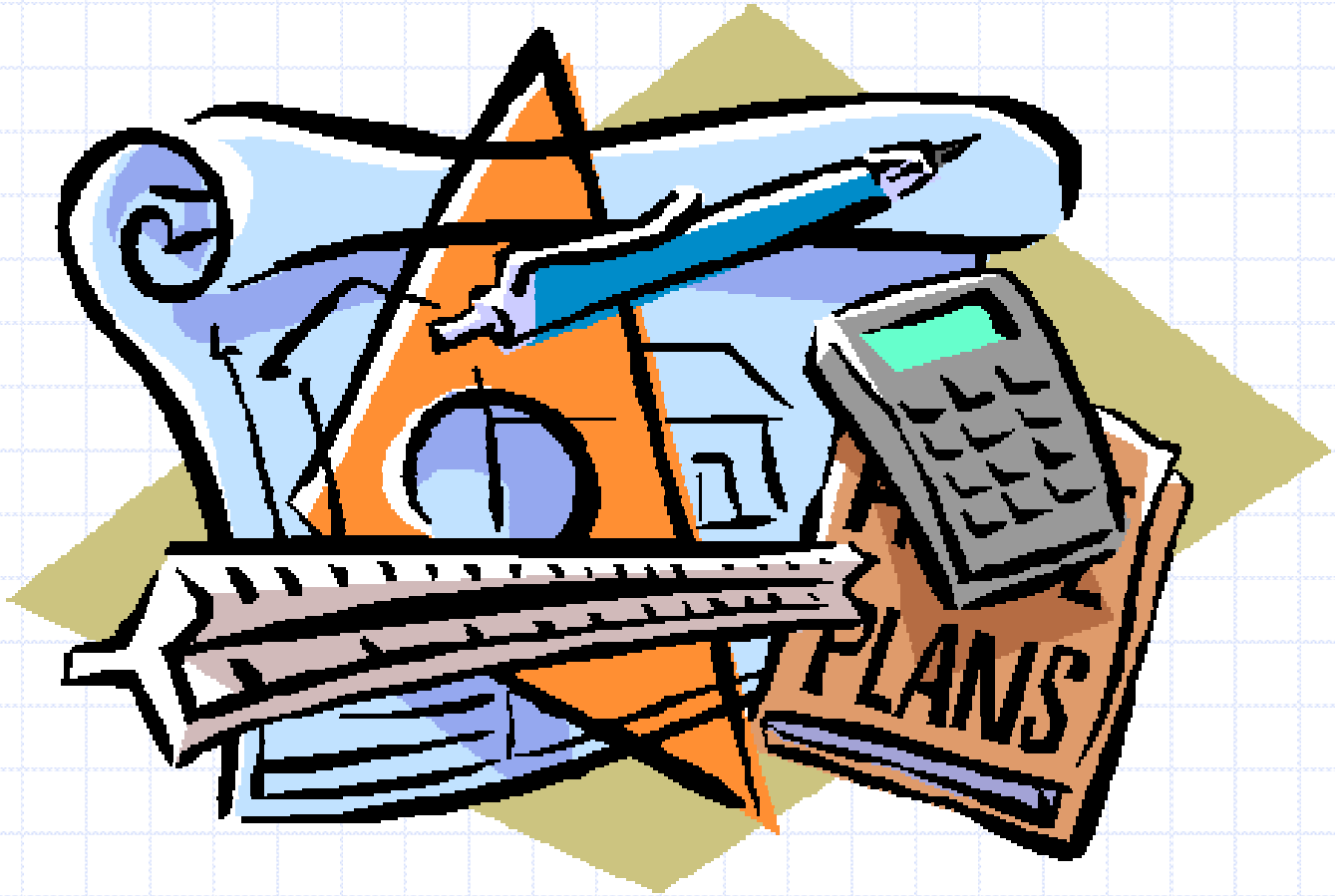
Protocol: Pre-opening Inspections

- DFC will conduct pre-opening inspection at Food Processing facilities
  - Joint inspection (DFC and LH) for duplicative review
- Joint inspections performed for prototypical retail facilities
  - DFC regional sanitarian will contact LH
  - DFC will lead and joint input is recorded on inspect report
  - DFC plan review staff also inspect for “O1” prototypes

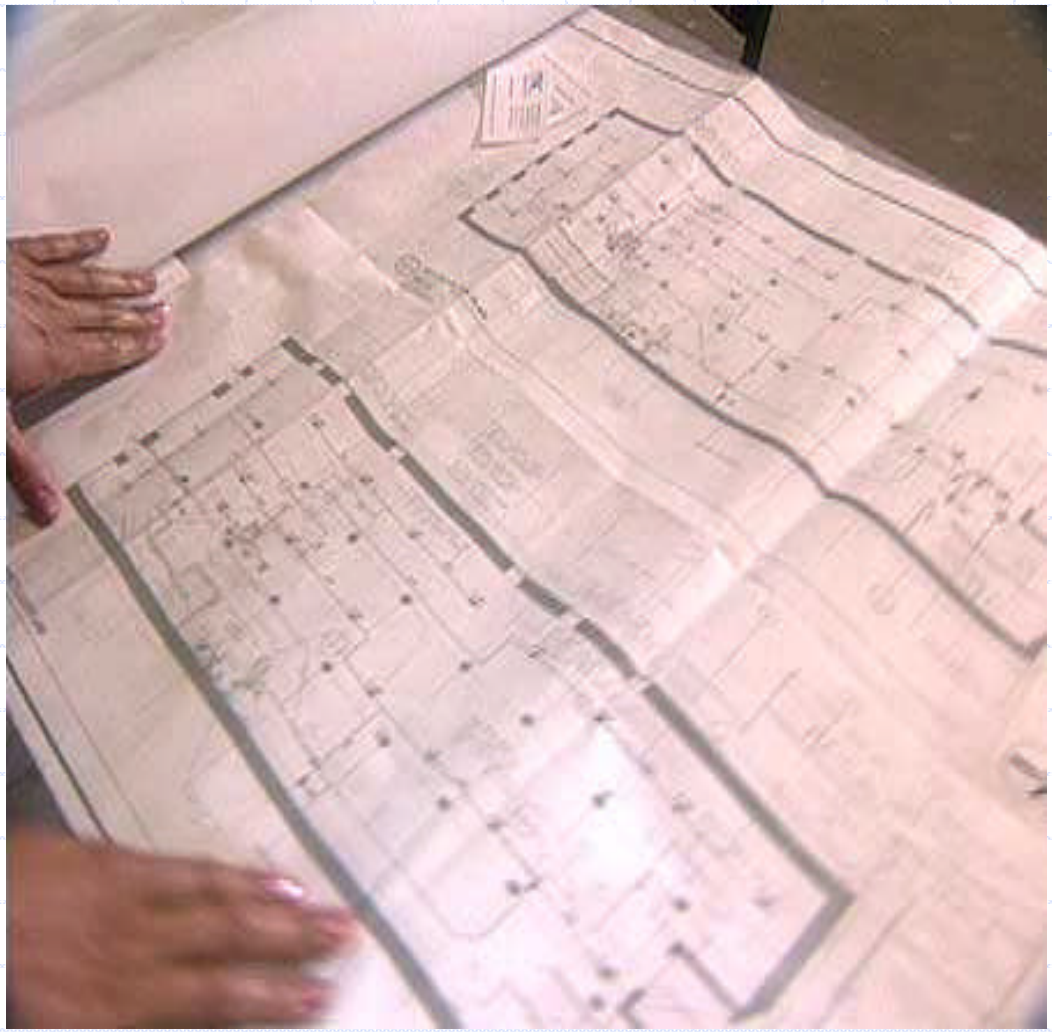
FAPR Broken Down



Facility Review



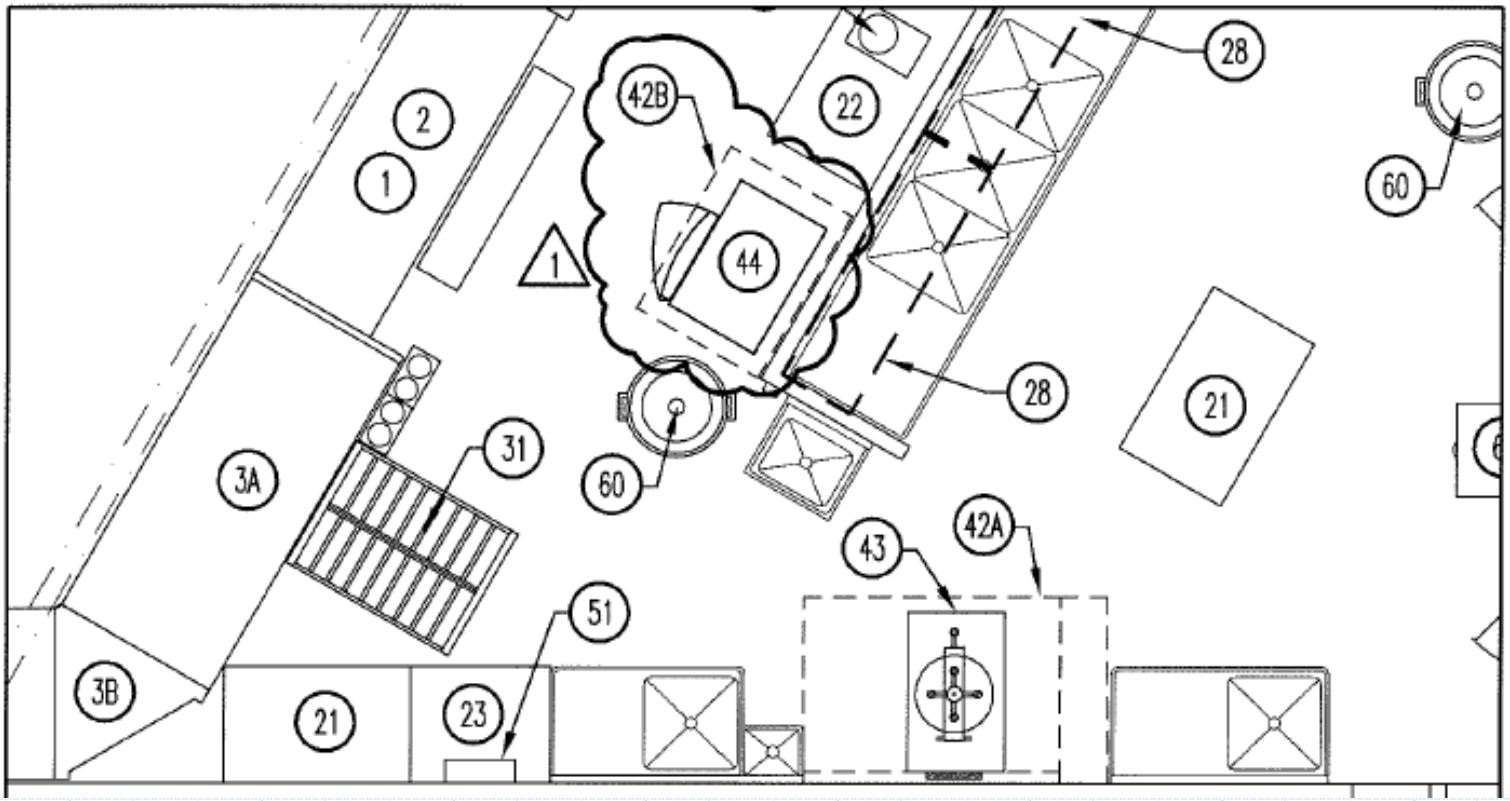
Items to Be Submitted for FACILITY REVIEW



- Drawing of proposed facility drawn to scale (e.g. ¼" per foot)
  - Identifies the layout and arrangement of work areas
  - Identifies the location of all equipment

Equipment Layout

- Numbered equipment list with corresponding identifying numbers on the drawing



Information to be Submitted

- Finish schedule listing materials to be used for interior finishes
- Layout and types of lighting
- Proposed ventilation system
- Description of facilities for garbage and refuse storage

Information to be Submitted

- Plumbing diagram including method of sewage disposal and source of potable water
- List and specifications for equipment
  - Equipment should comply with design standards of NSF, BISSC, UL, ETL or other applicable standards acceptable to the approving authority

Equipment Certification

- Standards testing organizations receive accreditation to ensure equity and fairness in standards
  - American National Standards Institute (ANSI)

- Health Standards exist for:

Sanitation

Product Safety

Equipment Certification/Classification

- Given by originator of standard
- Given by organization that tests according to another organization's established standards
- Examples:
  - NSF – NSF certification mark
    - http://www.nsf.org/business/search_listings/
  - Underwriters Laboratories – EPH product mark & UL blue sanitation mark
    - http://www.ul.com/

Equipment Certification/Classification

- Intertek ETL SEMKO – ETL sanitation mark
  - http://www.intertek-etlsemko.com/
- CSA International – CSA sanitation mark
  - http://www.csagroup.org/
- Bakery Industry Sanitation Standards Committee
  - http://www.bissc.org/

Equipment Design

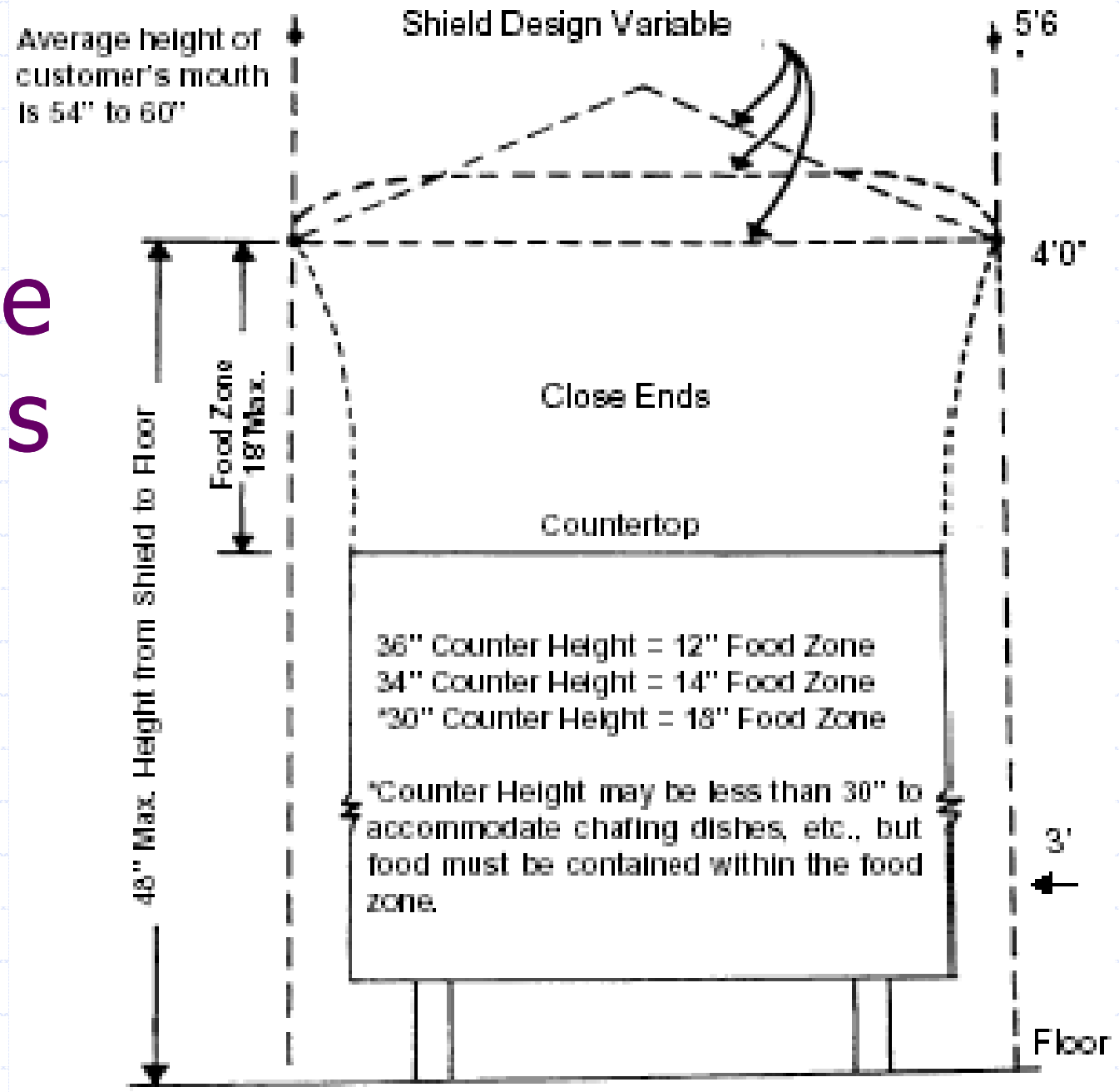
- Equipment on tables or counters must be sealed in place, mounted on legs (at least 4”), or able to allow for cleaning

- Floor mounted equipment must be elevated at least 6”, food contact surfaces at least 18”; AND allow for cleaning between and around unit

Equipment Design: Sneeze Guards

- Food shields, or Sneeze Guards, should be in place to intercept the direct line from the customer's mouth and the food on display
- According to the FDA Food Establishment Plan Review Guide the average height to the customer's mouth is 54 to 60"
- http://www.cfsan.fda.gov/~dms/prev-toc.html

Sneeze Guards



Work Area Design

Work Area Design

- Evaluate flow pattern for potential sources of cross-contamination
  - Separation of raw ingredients and ready-to-eat foods
  - Sources of contamination such as waste, personal items/food, chemicals
  - Physical barrier, time, or distance

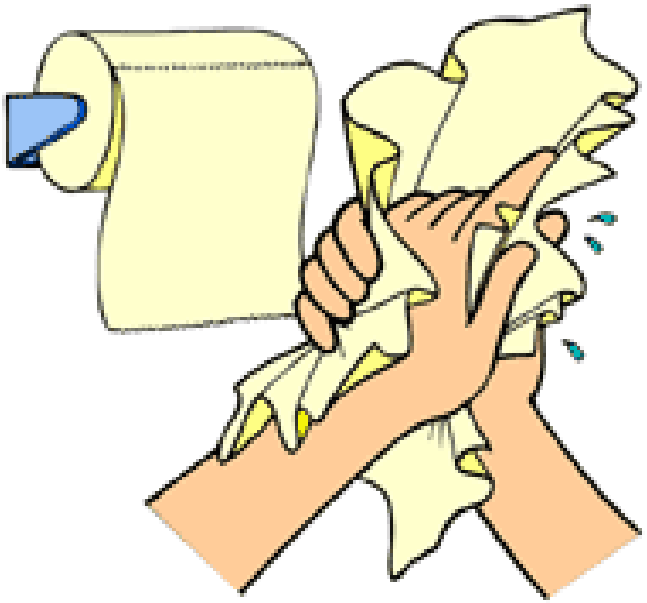
Work Spaces

- Unobstructed and prevent cross contamination

- Aisle space for new facilities or remodels
  - At least 3’ aisle space for one sided food prep
  - At least 4’ at aisle with back to back food prep
  - At least 5’ for back to back food prep and employees must pass through

Work Area Design: Hand Washing

- Hand washing facilities to be located in each food processing and utensil washing area
- Placement must be convenient, unobstructed, and readily accessible to employees
- Must be provided with soap and individual towels or a drying device



Work Area Design: Floors

- Smooth and easily cleanable
  - E.g. Quarry tile, ceramic tile, sealed concrete
  - Discourage the use of VCT in food preparation areas as it tends not to provide a durable surface under wet and greasy conditions
- Impervious to water
- Sloped to a drain where the floor is flooded during normal operations or cleaning

Work Area Design: Floors

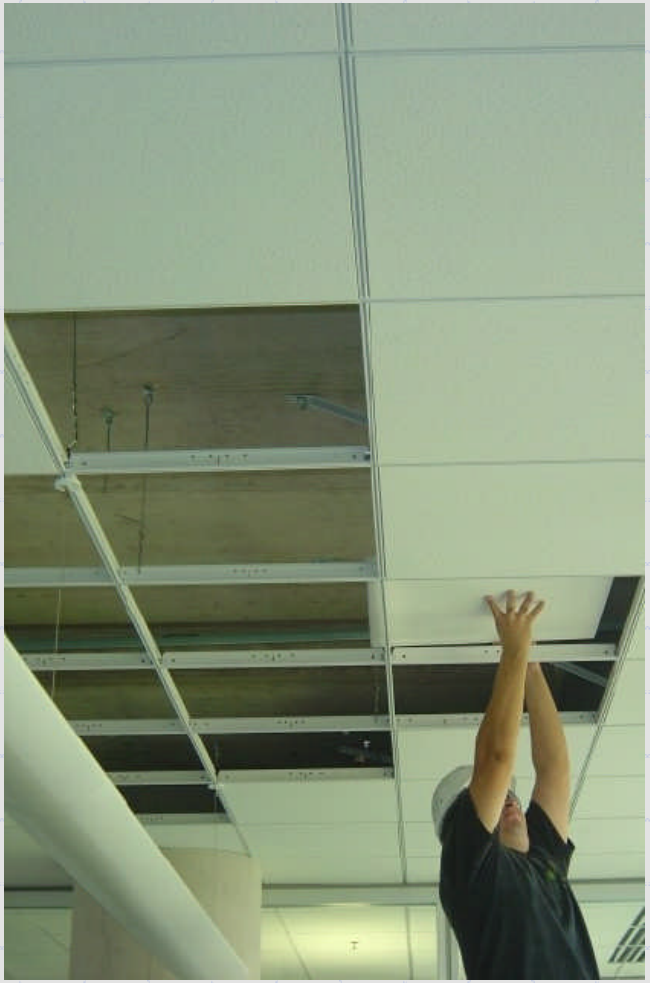
- Discourage the use of VCT
- VCT and vinyl cove base must be installed with an epoxy adhesive and a sealant applied to the top and bottom of the cove base

Work Area Design: Walls

- Smooth, non-absorbent, and easily cleanable
  - E.g. FRP, tile, filled and painted block
- Durable to hold up to repeated cleaning
- Stainless steel recommended in cook areas for cleanliness and durability
- Floor and wall junctures must have a coved base and be properly sealed

Work Area Design: Ceiling

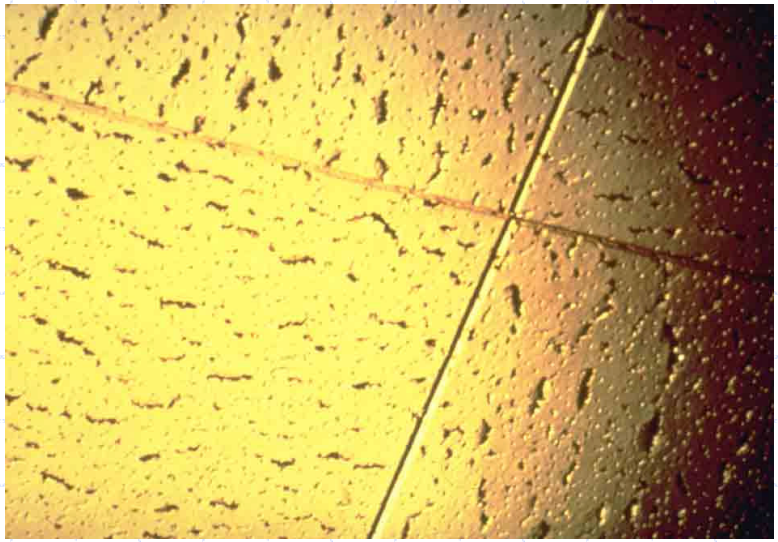
- Smooth, non-absorbent, and easily cleanable
- Free of exposed construction (studs, joists, insulation, rafters, piping) in walk-in boxes, food prep areas, and utensil wash areas



Work Area Design: Ceiling

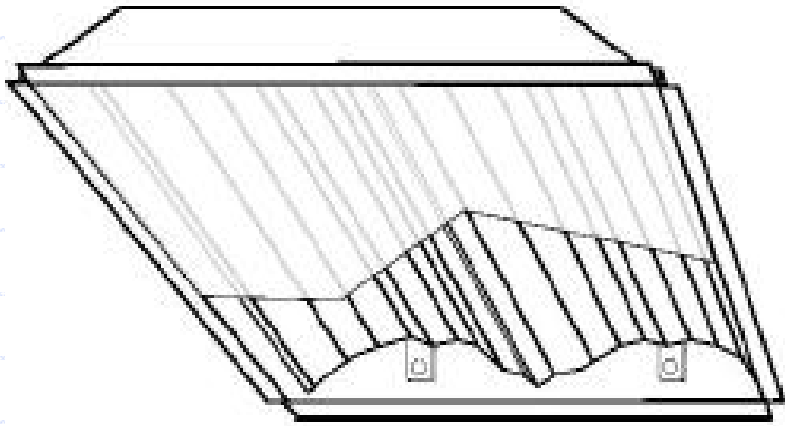
- E.g. Vinyl clad acoustical ceiling tile, vinyl clad gypsum wall board, FRP

- Acoustical ceiling tile must be non-perforated and non-fiberglass



Work Area Design: Lighting

- 50 foot candles of light
  - All work surfaces in food, utensil, and equipment
- 20 foot candles of light
  - Storage areas
  - Toilet rooms
  - Locker rooms
  - Garbage and rubbish storage areas
  - Dining area during cleaning
- Shielded or shatterproof bulbs



Work Area Design: Building Exterior

- Provide grease resistant ground surface in garbage storage area

Work Area Design: Plumbing

- Approved potable water source
  - Public or Private

- Approved sewage disposal
  - Public or Private

Work Area Design: Plumbing

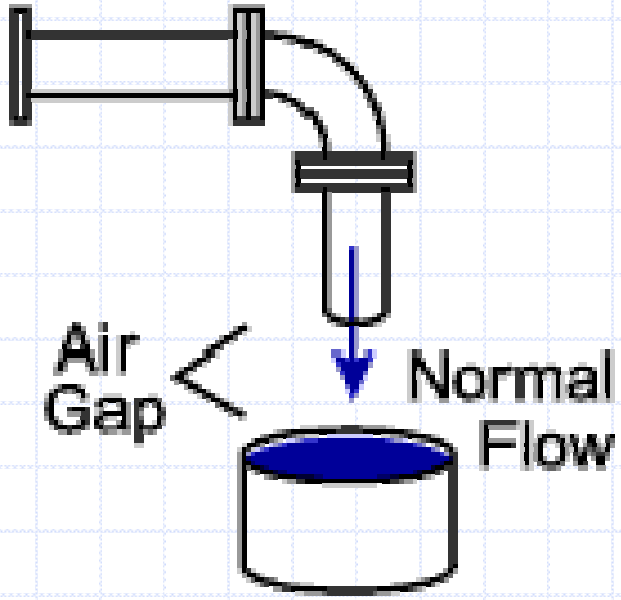
- Adequate potable water at proper temperature (max/min°F)
  - FDA requires at least 100°F for hand washing
  - 110°F for ware washing
  - In general, require the appropriate temperature according to manufacturer's recommendations

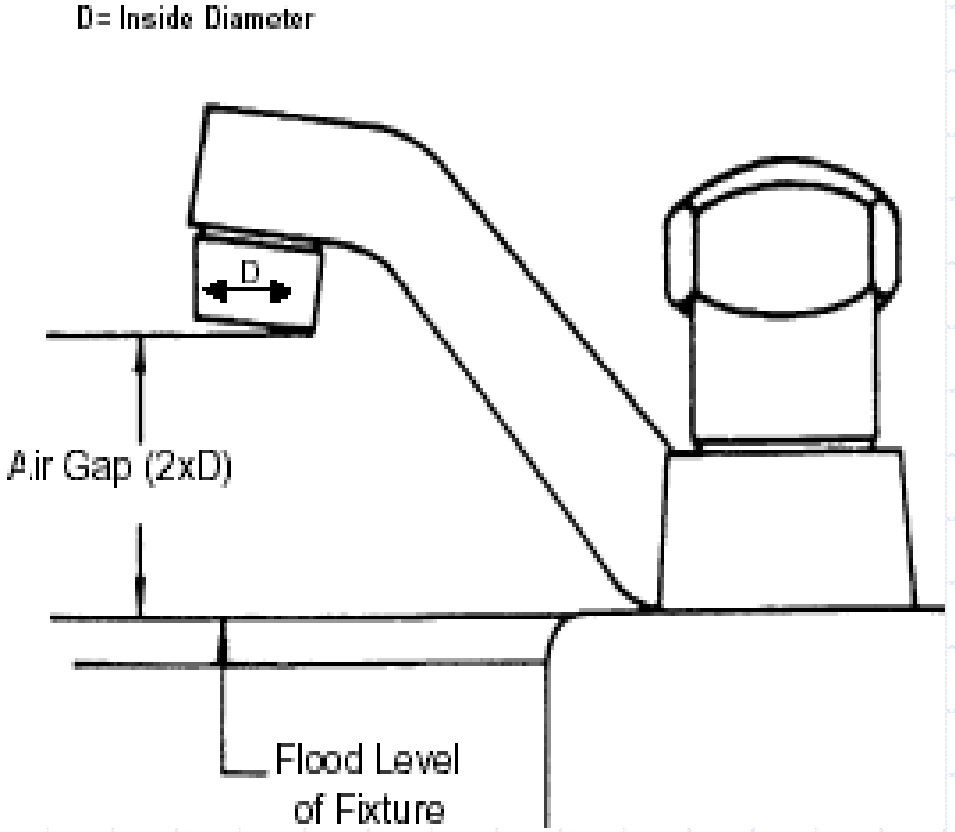
Work Area Design: Plumbing

- Layout and riser diagrams essential to identify type of drains, sinks, and connections
- Prevent cross connections, i.e. backflow and backsiphonage
  - No direct connections at equipment in which food, portable equipment, or utensils are placed

Backflow Prevention with Air Gaps

- Potable water supply can not be directly connected with any non-potable supply system



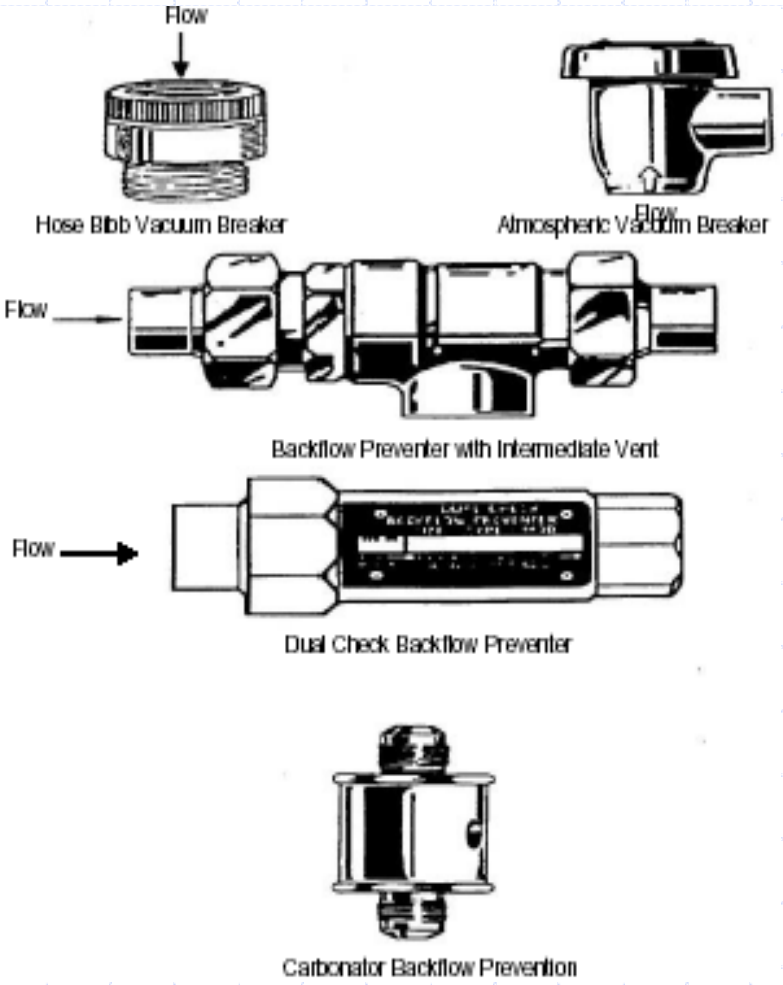


Multi Compartment Sinks

- Each compartment shall be indirectly drained through a separate pipe to a suitable trapped and vented plumbing receptor through an air gap
- No manifolded drain lines at multi-compartment sinks or condensate lines

Plumbing: Backflow Prevention

- Potable water supply system installed in a manner to prevent backflow



Plumbing: Backflow Prevention at Carbonated Beverage Dispensers

BFP with stainless steel and plastic construction

Indirect Waste Piping

- Food preparation or utensil washing sink
- Soda fountain
- Steam kettle
- Hot or cold drink machine drip trays
- Steam table drain lines
- Coffee urn or brewer over flow trench
- Mechanical potato peeler
- Dishwashing machine
- In-counter hand sink or prep sink
- Similar equipment in which food, portable equipment, or utensils are placed

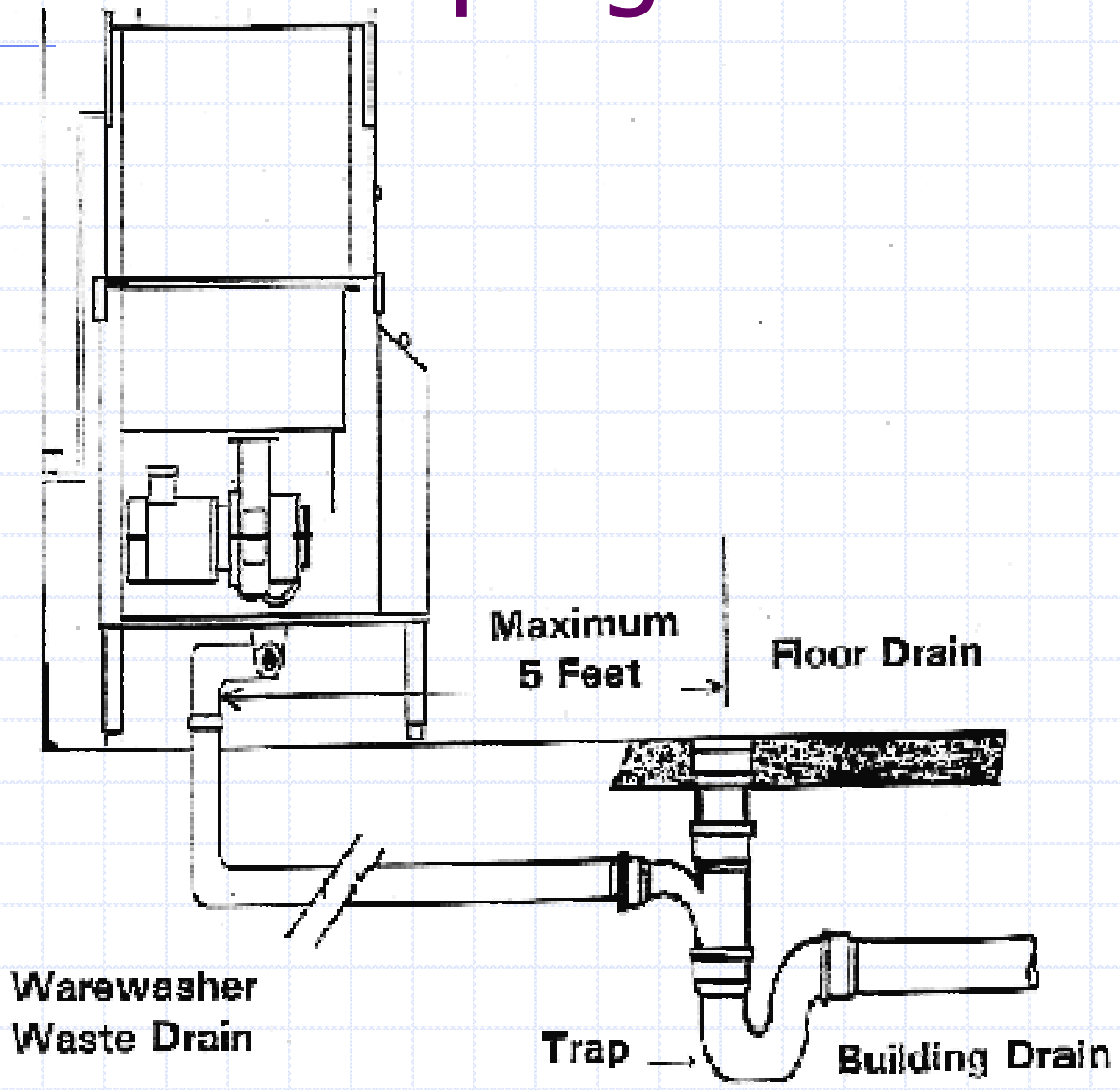
Indirect Waste Piping

- In-counter hand sinks or prep sinks are acceptable
  - Drain line must be plumbed indirectly to a floor sink

Direct Waste Piping

- Food waste grinders installed with direct connection
  - Sink may not be used for food or utensils
- Dishwashing machine installed with direct connection when connected to the upstream side of an adjacent floor drain trap
- Wall mounted hand sink and elevated or floor mounted mop sink

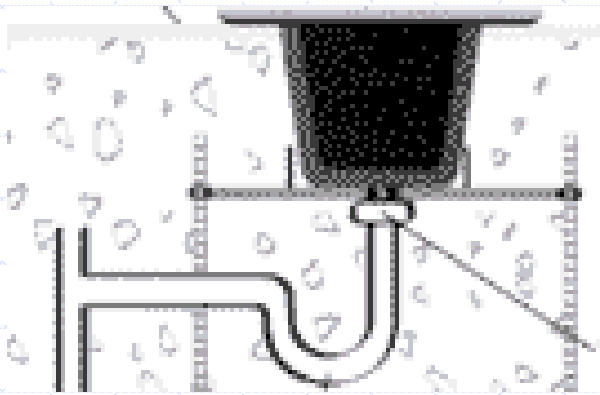
Dishwasher Piping Connection



Warewashing Machine with a Direct Waste Connection

Plumbing: Waste Receptors

- Plumbing receptors receiving waste of indirect waste pipes shall:
  - Have shape and capacity to prevent splashing or flooding
  - Be accessible for cleaning and inspection



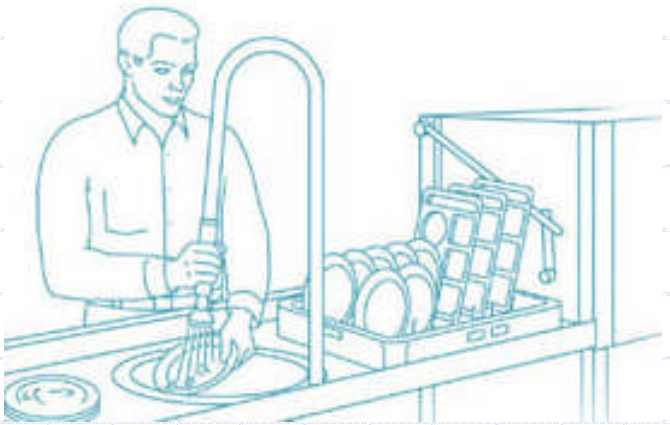
Plumbing: Waste Receptors

- Indirect drainage to hub or funnel floor drain for equipment with clear condensate waste-water only
  - Display case condensate lines
  - Walk-in boxes
  - Ice machines
    - Ice bin and condensate line plumbed separately

Plumbing: Ware Washing

Plumbing: Ware Washing

- Three compartment sink for washing and sanitizing manually
  - Dish tables or integral drain boards
  - Adequately sized for equipment to be washed
- Spray-type dish washing machine
  - Pre-rinse device
  - Ventilation hood to capture steam from hot water sanitizing machines



Plumbing: Ware Washing

- Under-counter dish machines
  - Approved for limited use only
  - Ventilation may be required if upon inspection a problem is noted with condensation accumulation
  - Drain boards or dish tables required for clean and dirty dish storage
  - Must be cleanable under the unit
  - Drain line must be plumbed indirectly to a floor sink

Work Area Design: Ventilation

Ventilation in the Restrooms

- Restroom ventilation must be at least 2 cubic feet of air per minute per square foot of floor space
  - Ft^2 area X 2 = required CFM
- Exhausted mechanically outside the building

Ventilation in the Kitchen

- Hoods may be required for removal of grease vapors, smoke, heat, steam, fumes, and obnoxious odors
- Sanitary and well ventilated area according to Maryland Ventilation Criteria for Food Establishments
- Mechanical air balance schedule
  - Overall facility air balance must be slightly positive

Ventilation in the Kitchen

Type I, Grease exhaust hoods, must be provided over cooking equipment that produces grease laden vapors

Type II exhaust hoods collect steam, vapor, heat, and odors—but not grease

Ventilation: Type I Hood

- Exhaust hood evaluation
  - Hood drawing in mechanical sheet
  - Hood make and model
  - Max temperature produced from equipment located under hood
  - Length of hood
  - NSF Certification or equivalent
  - UL 710 listed
- Exception granted
  - Two-sided grill for sandwich warming only

Ventilation: Type I Hood

- UL 710 listing "card"
  - Online Certifications Directory, Category code: yycw
  - Exhaust Hoods Without Exhaust Dampers

Model	Length Ft	Air Flow cu of Hood Length *		Max Cooking Surface Temp F
		Min Exhaust	Max Supply #	
L-R	6-24	251	216	400
L-BL	4-24	114	—	400
L-PR	4-24	233	167	400
L-EX-BS-N	3.5-15	250	—	600
L-EX-BS-N-FP	3-18	270	190	600
L-BD, L-BD-BR	3-24	150	—	450
L-BD, L-BD-BR	3-24	200	—	700
L-CBD, L-CBD-BR	3-24	180	—	700
L-CND-BR, L-ND-BR, L-CND, L-ND	4-24	250	—	700
L-CNFR-BR, L-CND-BR, L-ND-BR, L-CNFR, L-CND, ND, L-CNELS-BR, L-CNELS	4-24	200	—	600

Ventilation: Type I Hood

- Underwriters Laboratories
  - www.ul.com
  - Online Certifications Directory
  - Category code: yycw

Ventilation: Equipment Temps

Equipment Type	Reference Temperature °F
Low heat, steam, & grease ▪ Pizza ovens, single enclosed ovens, small steam kettles, open burner ranges, steamers	400
Medium heat and grease ▪ Griddles, fryers, skillets, braising pans, hot top ranges, double ovens, pressure fryers	400
High heat and grease ▪ Char broilers, broilers, woks	600
High heat and grease ▪ Wood and charcoal	700

Ventilation: Ventless System

- If the ventless hood is acceptable, Ventilation Criteria 4.311:
  1) The air recirculated into the space contains a grease concentration of less than 5 mg per cubic meter
  2) The recirculating system and associated equipment must be located in a room or area which is properly ventilated to the outside so as to prevent an increase in the concentration of emitted grease and other particulates to an unsafe or unsanitary level
  3) The recirculated air meets all EPA and OSHA requirements regarding particulate matter (EPA test 202)

Ventilation: Ventless System

4) The recirculating system and any associated hood, grease collection, and fire suppression system meet the requirements of NFPA-96 and the State Fire Marshal
5) Recirculating systems must be listed with a testing laboratory
6) The recirculating system is associated only with equipment for which testing by a bona-fide testing laboratory has shown that (1), (3), and (4) above are met
7) The system meets the requirements of NSF Standard 2

Ventilation: Type II Hood

- Type II hoods over
  - Steamers
  - Kettles
  - Pasta cookers
  - Hot water sanitizing dishwashing machines
- Exceptions granted
  - Under-counter commercial dishwashing machines
  - Single light-duty electric convection, bread, retherm or microwave oven

REMEMBER…

- Acceptable or able to be approved by the “approving authority”
- State plan reviews of food establishments are limited to evaluations relative to the applicable food codes and standards
  - Do not preclude the requirements of other State agencies
  - Do not preclude the requirements of other local agencies